

REMARKS

Reexamination and reconsideration of the application as amended are requested.

The examiner's objection to claim 9 as "being of improper dependent form", under 37 CFR 175(c), is respectfully traversed. Claim 9 has been amended to overcome the objection.

The examiner's rejection of claim 8 as "indefinite", under 35 U.S.C. 112, is respectfully traversed. Claim 8 has been amended to overcome the rejection.

The examiner's rejection of claims 1-6, 9, 16-17, 19-20 and 28-30 as "anticipated", under 35 U.S.C. 102, is respectfully traversed. The examiner rejects these claims as being unpatentable over Fujio (US 5,471,988). Claims 2-6 and 9 depend from claim 1, claims 17 and 19-20 depend from claim 16, and claims 29-30 depend from claim 28.

Claim 1 requires that the third ultrasound transducer 122 have a plurality of planar transducer elements 130 arranged to provide the third ultrasound transducer 122 with an ultrasound-emitting outer exposed surface 128 which is substantially-entirely planar or includes at least a concave surface portion.

The examiner alleges that the third ultrasound transducer 478 of Fujio has a plurality of planar transducer elements arranged to provide the third ultrasound transducer with an ultrasound-emitting outer exposed surface which is substantially-entirely planar citing figures 64-65 and 67 and column 53, lines 36-53. Applicants respectfully disagree.

It is true that the third ultrasound transducer 478 of Fujio is a radial array type ultrasound transducer fixed in a belt shape over the full circumference of the probe 402A (see column 53, lines 36-40). This means that the radial array type third ultrasound transducer 478 is an array of a plurality of transducer elements arranged to provide the third ultrasound transducer 478 of Fujio with an ultrasound-emitting outer exposed surface which can only be described as not planar because it is a circumferential outer surface. It is noted that such surface is made up of the ultrasound-emitting outer exposed surfaces of the transducer elements of the third ultrasound transducer 478. Each transducer element is a planar transducer element having an ultrasound-

emitting outer planar surface as shown in figure 65 of Fujio, but the plurality of such transducer elements is arrayed to give the third ultrasound transducer 478 a circumferential outer surface which is not a planar outer surface.

Claim 16 requires first, second and third ultrasound transducers 418, 420 and 422 having a plurality of planar transducer elements 430 arranged to provide each of the first, second and third ultrasound transducers 418, 420, 422 with an ultrasound-emitting outer exposed surface 424, 426 and 428 which includes at least a concave surface portion.

Fujio discloses first, second and third ultrasound transducers 479, 479' and 478 each having a plurality of transducer elements. Figure 65 of Fujio shows one transducer element of the first ultrasound transducer 479, one transducer element of the second ultrasound transducer 479', and one transducer element of the third ultrasound transducer 478. In figure 65 of Fujio, the ultrasound transducer element of the first ultrasound transducer 479 is not a planar transducer element, and the transducer element of the second ultrasound transducer 479' is not a planar transducer element as required by applicants' claim 16. In figures 64 and 67 of Fujio, the planar transducer elements (one of which is shown in figure 65) of the third ultrasound transducer 478 of Fujio are arranged to provide the third ultrasound transducer with an ultrasound-emitting outer surface which is a circumferential outer surface which cannot be described as a surface which includes at least a concave surface portion.

Claim 28 requires one ultrasound transducer 118 and an other ultrasound transducer 122, wherein the one ultrasound transducer 118 has a substantially-fully-cylindrical ultrasound-emitting outer exposed surface 124, and wherein the other ultrasound transducer 122 has a plurality of planar transducer elements 130 arranged to provide the other ultrasound transducer 122 with an ultrasound-emitting outer exposed surface 128 which is substantially-entirely planar or includes at least a concave surface portion.

The examiner alleges that the one ultrasound transducer 124A of Fujio has a substantially-fully-cylindrical ultrasound-emitting outer exposed surface citing figure 29 and column 30, line 13 to column 32, line 52. Applicants respectfully disagree. The ultrasound-emitting outer exposed surface of the first ultrasound transducer 124A of Fujio is only partially

cylindrical (the array elements 124A cover only the top half of the semi-cylindrical surface seen in figure 29).

The examiner alleges that the other ultrasound transducer 120 of Fujio has an ultrasound-emitting outer exposed surface citing figures 27 and 29 and column 30, line 13 to column 32, line 52. Applicants respectfully disagree. The other ultrasound transducer 120 of Fujio is not seen in figure 29 and is seen in dashed line in figure 27 meaning that the other ultrasound transducer 120 of Fujio has a covered, and not an exposed, ultrasound-emitting outer surface. It is noted that ultrasound can pass through an acoustic window such as the covering balloon 164 shown in figure 31 of Fujio (see column 33, lines 1-6).

The examiner's rejection of claim 7 as "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects this claim as being unpatentable over Fujio (US 5,471,988) and further in view of Makin (US 2003/0018266). Claim 7 depends from claim 1, and applicants' previous remarks concerning the patentability of claim 1 over Fujio are herein incorporated by reference.

The examiner's rejection of claim 8 as "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects this claim as being unpatentable over Fujio (US 5,471,988). Claim 8 depends from claim 1, and applicants' previous remarks concerning the patentability of claim 1 over Fujio are herein incorporated by reference.

The examiner's rejection of claims 10-11, 13-14, 22-23 and 25-26 as "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Fujio (US 5,471,988) in view of Makin (US 2003/0018266). Claims 11 and 13-14 depend from claim 10, and claims 23 and 25-26 depend from claim 22.

Claims 10 and 22 each require that the third (as well as the first and second) ultrasound transducer 422 have a plurality of planar transducer elements 430 arranged to provide the third ultrasound transducer 422 with an ultrasound-emitting outer exposed surface 428 which includes at least a concave surface portion (see figure 5). The third ultrasound transducer 478 of Fujio has a plurality of planar transducer elements arranged to provide the third ultrasound transducer 478

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with an ultrasound-emitting outer exposed surface which does not include at least a concave surface portion. It is noted that such surface is made up of the ultrasound-emitting outer exposed surfaces of the transducer elements of the third ultrasound transducer 478. Each transducer element is a planar transducer element having an ultrasound-emitting outer planar surface as shown in figure 65 of Fujio, but the plurality of such transducer elements is arrayed to give the third ultrasound transducer 478 a circumferential outer surface which does not include at least a concave surface portion. Substituting a medical treatment and imaging ultrasound transducer of Makin for a medical treatment ultrasound transducer or a medical imaging ultrasound transducer of Fujio will not provide Fujio with a third ultrasound transducer having a plurality of planar transducer elements arranged to provide the third ultrasound transducer with an ultrasound-emitting outer exposed surface which includes at least a concave surface portion as required by applicants' claims 10 and 22.

Inasmuch as each of the objections and rejections has been answered by the above remarks and amended claims, it is respectfully requested that the objections and rejections be withdrawn, and that this application be passed to issue. The Commissioner is authorized to charge any additional fees required or to credit any overpayment to Deposit Account No. 20-0809.

Respectfully submitted,

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